WILDLIFE ANNUAL PLANNING MEETING
OCTOBER 27, 2010
BLM Pinedale Field Office – Rendezvous Room

0840 Shane DeForest called the meeting to order. Welcome BLM, WYGF and Operators, this is a working meeting. Pleased with turnout, and pleased with information coming in, and the timing of that information coming in; it will help develop some meaningful outputs. The process will be transparent, with presentations and input from the public and questions to follow.

Introduction of Mary Martin – Facilitator with University of Wyoming Cooperative extension Program, stationed in Jackson.

Mary – agendas posted in front. Went over groundrules for the meeting. There will be two opportunities for public to participate. Until then, please observe and listen to the people at the round table. Public can also send comments in via email to: pinedale_wymail@blm.gov.

Introductions from round tables: Shane DeForest, FM PFO BLM; John Ruhs, DM HDD BLM; Joel Thompson, Western Ecosystems; Scott Smith, Wildlife Mgt Coordinator WYGF; Tim Murray with Shell; Art Reese with Ultra, Shell, and QEP; Mike Helwig with Ultra; Dennis Beccue with QEP; and Hall Sawyer with West, Inc. Introductions of operators participating in discussions sitting in the front row: Kevin Williams with QEP; Debbie Stanberry with QEP; Pete Guernsey with QEP; Aimee Davison with Shell; Cally McKee with Ultra; Margaret Spearman with Ultra, Shell and QEP.

All power point presentations are available at: Z:\JIO_PAPO Team Space\PAPO\Wildlife presentations – 10 – 27 – 10 on PFO internally, and posted on the PAPO website: http://www.wy.blm.gov/jio-papo/

Mule Deer Monitoring Results – Hall: Power Point presentation. (Hall is a research biologist with West Inc. based out of Laramie. He has been working with Mule deer since 1997 and will provide brief overview of mule deer on the mesa: parameters measured and preliminary results from this past winter.)
Sublette Mule deer study background: 98-01 – industry (Ultra) funded the study. Documented movement and distribution patterns. ROD came out in 2000. 2001 Phase II implemented (predominantly funded by QEP). Purpose was to determine how, or if mule deer responded to gas development. This effort ended in 2007. 2007-08 Supplemental EIS and ROD wrapped up – transition period.
2009 PAPO established. Mule Deer; changes in numbers on the mesa and avoidance distances. Bottom line is change in deer numbers. Above two things difficult to measure. WY COOP conducted an independent review of the matrix protocols.
Abundance: low statistical power for detecting 15% change between 2 years. Why use 2005 as a reference area?

Avoidance : unclear methods, unrealistic avoidance assumption, and why tied to abundance trigger?
Methods of measurement: behavioral avoidance (goal is to make inference to a project area). How animals avoid infrastructure. Best approach to date is to use helicopter net gunning and equip the animals with GPS to monitor every two hours where they are. Can then estimate RSF (resource selection function model) (predicts probability of use in that project area as a function of different habitat areas). Can then generate predictive maps on changes through time.
Calculate average distance to well pads – avoidance distance – a little over 3 KM now. 2009 was 2.4 KM. No increase in avoidance between those two winters. 2.4-3.4km is consistently the average.
It may not be realistic to expect deer to keep increasingly avoiding that area indefinitely.

Abundance is what really matters: since 2001 measured by 68 one-mile square blocks across the mesa: Out of those, 34 quadrants were flown – 50% coverage. This is excellent from a big game standpoint. Colorado only samples 20 percent of their area. They go out with a helicopter and count deer.

This is where the abundance estimates come from. 2009 winter – estimate was 2088 deer. 2004-05 winter 2,894 deer. Equals a 28% reduction. Larger than 15%. What about concern – statistical power for detecting change between 2 years? We will now fly more blocks which will increase our statistical power.
What is the best approach for assessing change in abundance? Original intent was not to compare one year to another year. A more rigorous way is to use all of the data you have and look at trend over time. (Regression analysis). Is the slope different than zero. Yes.

Looking at all 9 years. Long term trend indicates 36% decline. In the report, tried to acknowledge criticisms of the independent review, and presented how surveys originally designed and look at all years combined.
Sublette Herd Unit – WFGD estimates based on POPII models. Was the decline only on the mesa or over the Sublette herd unit as a whole? GF estimates entire Sublette herd 2001 vs 2009 experienced a 25% decline. Between 2005 and 2009 Sublette herd declined by 7%. During the same time periods the Mesa declined 60% and 28%.
Ideally we would have perfect reference unit, but we do not. We are looking at the Mesa population of deer which are a part of the Sublette Herd. We are working with what we have. No evidence to suggest that entire herd declining like the mesa.
In Ryegrass and Soapholes, another area within the Sublette herd: looked at 33 blocks identified and for past 4 years, tried to fly 50%, flying 17 of the blocks. These population numbers have steadily increased since 2006. Using this reference as a comparison, there is no evidence that deer in other areas have declined like the mesa.
Why the sharp decline on the mesa? Probably one of the mildest winters for a long time. Perhaps the deer that normally winter on the mesa didn't have to go that far? Had 5 collars and all 5 of those went back to the Mesa.

Restrictions on motorized use In Ryegrass – implemented 2 winters ago are holding more deer than they have in the past.
Increased levels of drilling/development on the mesa; or?
All of the above.
Monitoring plan not designed to answer the why questions – just to say what happened.
Prior to development, our understanding: conventional wisdom, ryegrass and mesa deer spent early part in ryegrass then cross over into the mesa. Last 4 years, GPS collars, found most deer captured in ryegrass and soaphole, stay there. Handful of deer do bounce around the mesa and then back over. Again came over in late February for about 2-1/2 weeks, then went back over to Ryegrass. Would the deer have stayed on the mesa in the past?

A slide on information not in the report - mule deer mortality: Annual survival (adult females) in most deer populations is 85%. On the mesa, it is about 80%. This year, we captured 30 deer, and mortality is 70%. (annual survival of adult females is less than 70%). Deer came off winter range, made it through most of the migration, then died before reaching summer range. We've never seen anything like this before. Raises red flag.

Survival info will be finalized (isn't a part of the matrix report). Difficult to find all of these deer in the summer, as well as recover all of the collars, so somewhat difficult to get a handle on the exact mortality. Most mortality happening in late spring which is indicative of poor body condition.

Shane: BLM: mule deer result comments:
Pinedale Anticline Project Area Mule Deer Statistical Report – see power point.
Overview of BLM's approach & comment on report. (slides are numbered)
Documents which guide and inform decisions and actions: Supplemental EIS of Pinedale Anticline, Final ROD, Mule Deer Report.
Data Summary: Mule Deer, Population Status and Trends – (includes WY State deer populations).
Percent change comparisons: Statewide herds between 05/06 and 09/10 declined 12%, Sublette herd over the same period declined 7%, Mesa declined 28%, Soapholes/Ryegrass population increased 125%.
Observations/why the changes? : activities on anticline, displacement/relocation, mild winters, other human disturbances, normal population fluctuations, improvement in Rye Grass/Soaphole, others.
Whatever the reason, the Matrix Threshold has been reached. Further discussion AND action must be considered.
What matrix says: change in mesa deer numbers, avoidance distances, mitigation response.
How the Matrix threshold is determined is change in Sublette subtracted from the change in the Mesa equals the number we are watching. With this data, we have change in Sublette 7% subtract change in Mesa 28% so we are looking at 21% decline. Matrix trigger is 15%.
Change in mesa deer numbers:
Avoidance distances/mitigation response: select response as established in ROD, implement, monitor over sufficient amount of time.

Sequential mitigation response as defined in the 2008 ROD: onsite, onsite/offsite, modification of operations.
Considerable experience and expertise has been brought to the table: Greatest cost to benefit ratio – received info, suggestions from variety of sources. We will continue to gather this.
Actions taken prior to and upon issuance of final ROD: monitor results to determine effectiveness of treatments. (see power point for details)
Habitat enhancements: weed treatments, sagebrush and other browse plantings, understory release treatments (mowing), fertilization study, seeding trials, and fence modifications. These have applicability in other areas, also.
Some of our efforts are outside of the anticline but they are still applicable as information on what works and what doesn't work as preparation for more wider treatments. Keep in mind the maps Hall has, showing the patterns of movement – i.e. purchase of conservation easements and other improvements.
Other methods for reducing disturbance of the deer have also been undertaken.
Major emphasis over last 2 years has been monitoring - of other species also.
So why hasn't mitigation prevented declines?
We have only begun to implement mitigation treatments for the PAPA, monitor the results of ongoing mitigation treatments, and adjust our efforts. Treatments have been on a smaller scale, more investigations to see what works, and we've only had these on the ground for a couple of years. Predominantly, there has been a monitoring emphasis. What we learn from the treatments done, can be applied in the future. (Adaptive Management).
The SEIS acknowledged that "habitat impacts will be substantial due to full field development." This is not a surprise to us.
The ROD in Appendix B disclosed the purpose of mitigation process utilizing performance based measures to proactively react to emergent undesired changes. (what we have today).
Response is early enough to assure both effective mitigation responses and a fluid pace of development.
Response is designed to provide certainty to the affected agencies, and the public, that impacts to wildlife will be addressed before consequences become severe and irreversible.
Monitor changes.
Continue implementing the final ROD. Move forward.
Some mitigation not yet tried: voluntary lease suspensions, lease buyouts, voluntary limits on area of delineation/development, drilling establishment of forage reserves, other,
Some we have tried: conservation easements, maintenance or corridor bottleneck passages, protection from development, habitat enhancements.
Adaptive Management:
We are committed to continuing to work to mitigate the impacts of development on the anticline.
We want to year your ideas.
Feedback, implement, monitor, adjust.
Copies of the slides will be available on back table.

Break – 9:32 – 9:47

Agency & Operator Discussion on Mule Deer Results

Scott: WGFD: For members of the public, new information this past week, completed sage brush fertilization on 468 acres on one end of Mesa; one of our first on-site habitat treatments. On-site habitat enhancement is the obvious logical place to start, but done with traditional sagebrush improvement habitat improvements (kill sage and reseed). How do we enhance the habitat without killing the sage? Fertilization was first effort to look at – is this possible without actually killing large stands? Now we will monitor and see if we can get positive results, particularly from herbaceous understory and sagebrush communities. We've taken a baby step. As it's laid out in the ROD, obviously onsite habitat treatment is first priority. We also need to capture opportunities on-site, offsite – as you move off the mesa up elevation, you get different subspecies of sagebrush that typically respond better, especially in higher precipitation zones. Need to redouble efforts in transitional areas where mule deer hit in the fall and early spring. If we can enhance the areas where the does are moving once they move from the core winter range, better nutritional plane during 3rd trimester of pregnancy, it would benefit this deer herd. Sommers-Grindstone conservation easement – properties adjacent and in the corridors, are a huge opportunity to work with these ranches looking for habitat improvement opportunities. Reclamation also very important to achieve the type of reclamation the companies are striving for as far as restoring wildlife habitat as quickly as possible. As the wells are completed and developed, as much acreage as possible can be returned to productive habitat. Water improvements, PAPO, can also help provide alternatives for livestock and move them around. Encourages BLM to continue down those paths working with permittees off the crest of the anticline. Scott doesn't have any new pearls of wisdom of what can actually be done with habitat, but these are some ideas.
Habitat component/Human component. Disturbance end – outlined in ROD – re-emphasize critical review of any wildlife exception or new activity, particularly development areas 1 and 2.

Tim with Shell: doesn't see anything he takes exception with. Absolutely agrees with what Scott says. 4 steps in ROD to implement it. Has some questions with statistics. No doubt that we have a matrix trigger. Primary step to take now, given the mitigation already done (Sommers, flank) need to monitor results and make sure they're good, active results. Talked at length among operators – special cause this year - LGS construction. Upper range – very major project. Like to see next year, now that it is done, what the results will be, given lower activities. Sommers-Grindstone good opportunity. Look at monitoring along what's already been accomplished, and move forward. See what the results are before we start reacting too much to what could be natural cause variation.

Mike from Ultra: to add on – slide 8 of Shane's: lots of unknowns. Need to understand this. Lots of mitigation going on; evaluate and monitor. Basically coming to the close of the second year.

Art: Ultra, Shell, QEP: Operators agree with what Scott says. Sommers-Grindstone presents opportunity for huge amounts of mitigation. If there is mitigation here, precede with baseline inventory, followed by monitoring to see if there are proactive prescriptions – are they doing what they are supposed to. Fertilization project mentioned probably a good thing. Habitat improvements on the flanks mostly; centered on fertilization. Good monitoring dynamic built into this to see if it's working. Relative to slide 8 – ROD requirements in the matrix, that all non-oil and gas activities be subtracted from the equation to see what the need of oil and gas would be to the decline of the trigger matrix. Has this been done? (Drought, weather, where the deer stayed). Monitoring *protocol* needs to be in there since it is in the ROD.
If monitoring built into fertilization project, assume that if it shows good results, is this an expandable project over time?
Scott: Yes, although it's the BLM's call – that's why the trial was set up to try different things.

Mike: Ultra: LGS—largest piece of onsite mitigation, estimating 165,000 reduced truck trips in the field. Lot of good things moving forward with the mitigation put in place. Just now reaching completion.
Dennis: QEP: What Tim and Mike commented on – with LGS: Northern end when initial late 05 installed. Deer numbers significantly high. Agrees that benefit yet to be identified and should be watched closely and analyzed.
John Ruhs: BLM: couple things – no doubt that importance to monitoring. Cannot understand values from LGS, fertilization, other things, otherwise. Lot of potential reasons why we have had some fluctuations. Cannot quit the monitoring, also need to emphasize continued and increased habitat enhancement. Need to identify those areas that are prioritized core winter habitat areas and enhance habitat. Transition areas – identify where those are and what we can do for habitat enhancements. Scott also mentioned reclamation – it is imperative to go back and look at monitoring on reclamation and document what progress we've made, and what we can do better. Reclamation is one of big things that we haven't reached maximum – lots of opportunities to do a better job. Doing some of better reclamation on anticline, but BLM needs to focus on better.
ART: question – after going through this – when doing monitoring, is it on the entire analyzed PAPA?
Hall: No, just on mesa. Everything south of New Fork - Just doing crest – study area goes clipped to boundaries of the flanks of the PAPA. When fertilization occurs on the flanks, it will be folded into the monitoring. GPS data/helicopter counts can utilize the data.

ART: If we do habitat descriptions on-site and off-site, it will be critical that it will be folded into the annual monitoring, to adjust and monitor results in the following years.

Shane: BLM: By way of notion of on-site/off-site: look at areas and associated risk of just mesa on-site. Heard what Scott said, and it is an important consideration: availability of habitat – improvement, there is inherent risk of potentially reducing amount of sagebrush that would result in higher forage. Weigh heavily. Thinks unwise for it to be exclusionary consideration because if we are looking at trends and critical monitoring point is mesa, then primary way to achieve turnabout in numbers trend, is to affect something on the mesa first, so that changes taking place can realize changes in numbers on the Mesa. Risk management call here. Inherent risks associated with this. Experimental treatment monitoring and we see outcomes, can use this to better inform of risks taken. Can then reduce amount of time on the ground, over longer term, can get something better than what we started with.

Outside immediate mesa area – mortality data is new to us - still need to digest this. Face value, strong indication that we need to look at transitional ranges. If impact of development and other potential contributors, then how quickly we can turn around decline in body condition is critical. Need to look at and define what we need to have happen when we do treatments (projects) on ground. Need to define for public and all parties involved, precise goals area, and design monitoring around whether or not they are working. All treatments will be tempered by local environmental monitoring pre and post treatment, and the connection of the treatments with populations.
Idea of sorting out incremental "other" impacts as they relate to the decline. Consideration of that in ROD, however, imperative at this point that we move forward with what we have today, which is demonstrated population decline which triggers the Matrix. ROD intent was to provide for timely response to prevent population threshold decline. Need to move forward with treatments on the ground while continuing to collect data. We don't want to cross a mark that we can't get back.
Mike: Ultra: Agrees.
Shane: reclamation – at this point.
Scott: reclamation: definitely will be a focus for us. Means to accomplish this may be to look at seed mixes, method of seeding, species mix. May look to planting direct container plants. Species mix

related to deer mortality, look at types of species, possibly besides sage brush that have higher nutrition, possibly different times of year.
Tim: Absolutely agrees. As a statistician, deals with uncertainly. Would want 95% certainly if working with industry. .23 – correlation of this data is lousy. Concerns of quality engineer is getting into an oscillating pattern because we don't understand. Don't overreact and come back next year and overact to correct the overreaction. Some things have natural variations. Really need to emphasize monitoring. Whatever we do, additional enhancements or reclamations (Shell & QEP reclaimed 95 pads), but really need to understand the impact of these things before we set ourselves up Important that we monitor the wildlife (stated positively). To get statistical analysis, sample size is critical. Want good correlation. Need to monitor Sommers-Grindstone for all wildlife species. Thinks positive step to take fertilization and reclamation projects and monitor their results. What positive impacts, and what kinds of positive impacts. Good thing to monitor LGS.
Joel: West: no comment, waiting to present his report.
Hall: just provide the data.
Scott: Hit threshold. Hopes we don't get hung up on cause and effect as to why. Can argue statistics all day. Need to move forward proactively and put projects on the ground. Treatments or disturbance management, whatever. Need to be proactive.
John Ruhs: heard Art saying that if we do enhancements, need to fold that into the monitoring. Good example is flanks and fertilization projects and modeling that Hall's group is doing. LGS – same scenario. Make sure we've identified the improvements and make sure we have protocols in place to monitor the benefits. A definite DO. Doesn't matter what the number is, but it does matter that we've hit the trigger and need to take aggressive, positive action to keep from reaching threshold we can't come back from.
Tim: Agrees. No one wants to see decline in wildlife. Don't want to make too much of numbers, but wants to make sure that numbers are correct. Proactive projects good. Need to do it in terms of ROD and scientifically.
Art: Reinforces what's already been said. Threshold hit – need to take actionable items with good monitoring, and go forward. Need to know which worked and which didn't. Sequentially, in matrix, hit trigger, do mitigation, monitor, if didn't work, go to mitigation, do this until get to step 4. This type data critical.
Shane: We should be clear what is meant by completing "a mitigation" – what we've done to date is collect monitoring data. We have completed the Sommers-Grindstone acquisition and it is a tremendous opportunity. A mitigation is, initially, trying things on the ground and getting results. On the books we have or are trying, fertilization, mowing, seeding; so collectively, those represent a mitigation. It has been a very short time since those things have been implemented - only a couple years. Agrees with Tim's comments – don't want to get too over-zealous with extreme variations. Don't expect that to happen. If we're on a trajectory, we could experience some recovery. At same time, it is wiser for us to initiate further mitigation on basis of where we are headed. We can expect some vacillation in population numbers and may result in a moderation of the decline. Might see small increase in the next year. It's worth noting that all changes noted in Hall's report are on heels what otherwise would be significantly a mild period of time. Logical to say move forward because we are on the heels of a mild winter, with another mitigation. Look at types of vegetative recovery, and other methods of rehabilitation, reclamation. Idea is that a year from now, if we see further declines, we'd have a wider sweep of treatments and available info as to the effectiveness of those, then move forward with what works.
Mike: we have a good book to guide us (ROD). Talked a lot about continuous habitat mitigation. Lots good done so far. A lot of unknowns talked about today. Had mild winter, perhaps ½ of activity of

operations in past years, less activity on anticline, and we still hit a trigger. A lot of things to try and measure – was this just an odd thing?
Scott: (comments to close out this session) he doesn't look at it as one odd point. Whole data set – there is a significant decline in the trend (last year was greater change). Need to get after this and implement on-the-ground actions.

PUBLIC COMMENT and Discussion on Mule Deer Results

Can submit thoughts to the email address on board, also (see above).
Tom Curry, worked with BLM as NRS, watched development of anticline from 5-6 producing wells to current situation. #s of deer on Mesa were approx 6400. Data doesn't capture actual impact. Impact of winter drilling is mitigation we are missing. Off-site mitigation usually takes up habitat used anyway. Need to manage livestock (fall grazing) as well. Numbers blatantly obvious – year round drilling. Especially winter drilling. Do not ignore what is in front of us and say we need to mitigate and monitor more.
Steve Belinda - Theodore Roosevelt Conservation Partnership: former BLM biologist here, 22 yrs: Everyone at the table lacks a fundamental understanding of ungulate biology. Assume that with more data, we will make better decisions. Past 12 years has proven that that isn't true. Need to address the deficiencies outlined by the U of WY. Address direct habitat losses to date. 1,857 direct habitat loss to date. Unknown # of indirect loss. Believes reverse the trend, and believes we are ignoring other off-project impacts from all lands: BLM, FS, and private landowners. Major problem is that there is no plan to address this specific herd. Don't know how to address long-term issues or what success is.
Dean Clause, WGF: WL Biologist: Wanted to provide couple suggestions: onsite - offsite mitigation efforts: one thing important – agrees with what Scott has to say: regards onsite: can do some habitat enhancement work. We are trying to enhance a smaller portion of habitat to maintain the herd. Several years back, had good momentum, trial experimental habitat improvements on the ground (5-10 acres plots). Now monitoring results of these. Right now, that's been dropped, but we need to continue to learn more. The 10-15 year periods need to be monitored. Trying to monitor effects of livestock. Some of these efforts have been dropped – need to continue to follow up on some of these projects. Tough to do when getting into statistical elements. We are seeing disturbance, abandonment/avoidance, can be seen on the ground. Winter activity is a big deal. If we didn't have winter activity now, we'd have better utilization of what's out there. Scrutinize activity levels for crucial ranges (by group). Mitigation – be careful what we call mitigation. Identifying management actions to hopefully mitigate. Need to monitor the responses. Four suggestions: research impact of grazing, winter drilling, careful what we call mitigation, winter activity, maybe be a management action.
Linda Baker, Upper GR Alliance. Lived here 30 years. Have watched the progression of oil & gas. More questions than suggestions: Adds to what Dean said. Noted that habitat manipulation occurred here for approx 50 years. Burning, spike, aerators, chaining; yet appears.. - don't see where results have been monitored, or where data has been collected and analyzed. Let's look at what's been done for past 50 years and how successful it's been and with numbers. Hall noted that study design not created to understand why there have been changes, but today we've focused (speculated) on what changes have occurred. Slide 7 listed possible causes. Getting back to plan – need to monitor what the causes are. Noted that, in certain kinds of habitats, animals have strong fidelity, other species, not clear to her how offsite mitigation actually benefits onsite. Consider habitat fidelity. Not clear to her what the condition of the remaining non-fragmented habitat on the mesa is. Intact habitat on-site. Do we need to manipulate this or is it fragmentation? Agrees with what Tom Curry said. WYGF dept has excluded vehicle access in crucial winter range, and it worked. (for many years). Winter time intrusion seems to be major cause of concern and limiting factor for mule deer populations. If you ski on the mesa, you will

understand exertions by the mule deer. Less cause for them to run, the more energy they will have to get thru winter. As one of many owners of Wyoming wildlife, a 36% of decline in population is unacceptable. Hopefully owners of Wyoming's wildlife will be given more ownership in this.
Summer Schulz: BLM: Address concerns on mesa. Met with grad students (U of ID) data collected, reports put out – can work with those folks to get info available to public. Permittees worked with that. Sublette County Conservation District started a co-op permittee monitoring on mesa. BLM trying to do more monitoring. Let them know of other opportunities.
Rollie Sparrowe: Daniel: 45 yrs resource/research/experience. Involved in first discussions for Hall's graduate study. Talk about importance of long term study to answer long term questions. Important now because tens of millions of acres under lease in other places other than Pinedale. Much of that in important mule deer habitat in CO, WY. We cannot afford to screw this up. Fact that we are talking about from 2005 or 6 on makes no sense. Need to look at what happened in first part, here and in other states. Lots of evidence that people want to disregard per Pinedale. Need to look more broadly. Monitoring is nationally important. Everything we see about mule deer; industry was a participant. Everything we see about mule deer is negative. Too much of sitting around table talking about what should be done. Bottom line is that interests at table set the threshold. Now anti-up and find solution. Habitat enhancement – what impacts it's had counted on one hand. To make it work for this deer herd, there should be a capability to translate what increased production does or doesn't do for mule deer. Otherwise, we're saying we're just doing something for wildlife. Lots more work that Hall and other researchers have done that could be translated into habitat. Have an equal need for monitoring for LGS. 12,000 truck trips bandied about a long time. Now time to take action.
Stephanie Kessler, The Wilderness Society: Thank BLM for this meeting – very productive. 1st – regarding whole topic. Very concerned about money to pay for it. She's attended PAPO board meetings where money spent for monitoring and mitigation. Have to also keep in mind how much money we have left and use it wisely. Have been millions spent to date for largely offsite mitigation efforts. Thinks we need to clearly look at proportion of offsite mitigation spent over years and evaluation if that's where we get biggest bang for buck and decide where to go next. Triage – with limited money left, couple things: Suggest take look at collared tracking data study has, tease out more info. Doesn't think we're really looking at all of the collared data - GPS results to answer question on where deer moving, avoidance; invest money in core for reclamation, or put money in flanks where deer avoiding. Better return on money short term. Like us to delve more into data we already have and identify best bang for buck. Lots of money spent on Jonah mitigation, which was stated, some of applied north, and PAPO fund on offsite mitigation. Results reported on today are some measure of feedback of whether offsite mitigation is working. Need to invest more in onsite mitigation. Much more focused onsite on the Mesa itself. Hasn't heard concentrated phase development working? Whole anticline plan based on get in there, intensely drill, and move on, and that would be better for wildlife. Not just for pronghorn, mule deer, etc. What can we learn from the pattern of phasing the development - look at pattern of development.
Melanie Purcell: Sublette County Conservation District: natural variation: would like to see that in the presentation of the results. Climatic conditions – what is being documented. Wet cold springs, disease more prevalent because of this? Would be nice to see some of that data.
Kathy Purves, Science & Tech advisor for Trout Unlimited and member of PAWG: supports Shane's preference to review the reclamation plan again. Adaptive mgmt – should be part of policy review. Refer to new WY BLM State Reclamation policy. Could be a good reference to incorporate into PAPO. Cooperatively done. It provides ten specific objectives to look at. It's very new and could be applicable here. As PAWG member, they spend every fall on a field tour. Reference to Dean's experimental plots, - she was pleased with condition of these experimental plots. Shrub establishment very good. These sites used as PR – could these be taken to a broader perspective? Container establishment works very

well in Wyoming mining, although it is expensive. Because of the threshold, this may need to be used. Suggest review of winter drilling exceptions. Years ago, this was supposed to be a trial basis. Cannot ignore that winter drilling has affect. Suggest review PAPO funding supplement for next 20-30 years. Fund established, was not permanent through the Governor's office. Opportunity for future funding.
Renee Seidler: Biologist with Wildlife Conservation Society: What is the end goal? Hit trigger point for (goal). Are we trying to reverse the trend, go back to 05 numbers, or ?, so that we can better follow mitigation. Second point: interest heard from group - importance of survival of mule deer. Contractor not funded to collect survival data in terms of description of monitoring. Emphasizes that group things important. Doesn't think included in RFQ. Thinks important to look at.
Dan Stroud: JIO/PAPO/WYGF: agrees with Scott. More funding issues – the more we spend on monitoring, less on-the-ground available dollars. Need to respond to these trends. Term "mitigation" is starting to cause consternation. 28 years in habitat business. Looks at things as maintenance. If we had been doing habitat maintenance all these years, probably wouldn't see quite the declines in mule deer. Need to approach management for enhancement - do on a landscape scale - look at entire Sublette mule deer herd. All uses on the ground involve habitat maintenance. All have to be in sync. Follow up mgt needs to be in line.
Summer: Reclamation that Ultra/Shell doing: sage growing on their pads a few years ago. Are we including that shrub data in renewed habitat (reclaimed locations done 3-5 years ago) as part of treatment?
End of session
Lunch
Back at 1 PM

Overview of Wyoming COOP Review:

Shane: (power point presentation): Actions in response to the Coop review that require matrix modifications or changes. Worthwhile to provide a very brief overview of this process. Items adopted based on recommendations of G&F and BLM:
Three recommended changes to be processed through adaptive management. Will require modifications to wildlife matrix. Intention to implement using adaptive process.

1. Mule deer avoidance distance. Agency concurrence and recommendation: WGFD and BLM 0.5km change per year over 2 years be dropped
2. Pronghorn Antelope Size of habit fragments used
   Drop 10% decline in habitat for one year provision
3. Sage Grouse Nesting Success and habitat selection
   Modify matrix criteria by dropping the nesting

Data will still be collected. Drop them from criteria within the matrix.

ADAPTIVE MANAGEMENT

Shane: Pinedale Anticline Adaptive Management process. ROD indicated that we would utilize an adaptive mgt process to make quality of decisions better. ROD doesn't describe exactly what that process is, but infers connection. Our interpretation and process: Central Themes: Tied to overall concept described in Appendix E of final ROD; BLM has ability to clarify and react in a timely manner, to changes in the biological environment; ensure public consultation. Clarifications: Implementation/use of Adaptive Management does not require waiting for Annual Planning Meeting. Important to recognize two pieces of the adaptive mgt

concept; 1. Public coordination/consultation; 2. Timely response. We felt that we could not, in every case, meet the timely response if we waited to decide until annual planning meeting. Process contained in memorandum dated October 20, 2010 (memo attached at the end of these notes):
Seven Steps.

1. Memo to field manager
2. FM convenes review team (PAPO, BLM, and other agency staff specialists)
3. Review team deliberations (determine if the proposal has merit, determine immediacy of need to change, determine NEPA compliance (we need to make sure we're doing it right.)
4. Provide public and industry review (14 days minimum - PAWG, public, industry). This thing needs a beginning, middle, and an end.
5. FM to review team consideration of public/industry review comments and decide what we want to do.
6. Preparation of final recommendation memo by review team. Our decision making process will be transparent.
7. Documentation of record/disclosure of decision. Package provided via internet or some other mechanism.

Update on Wildlife Monitoring Results

(check website above for copies of presentations)
Mark Pollock: Pygmy Rabbit presentation: Pygmy Rabbit Population Monitoring - Pinedale Anticline Project Area and Boulder Reference Area, 2010. Haden-Wing Associates.
Monitoring Requirements
-wildlife monitoring and mitigation matrix, 2008 ROD:
-3 consecutive years of decline in presence or absence of a species
Occupancy analysis: most powerful tool available.
Ability to simultaneously detect occupancy.
Need to account for variation in detection, need to account for detection, also.
Monitoring objectives: document burrow completely, occupancy, suggest recommendations for monitoring in 2011 & beyond.
PAPA generated 696 survey sites on public lands. 582 in PAPA. 10% of sites selected because of past pygmy rabbit sites. 90% randomly generated.
2009 Wyoming Natural diversity database. 444 sites. Surveyed only once. Takes more than once to estimate occupancy. Subsample distributions surveyed 2009 more north; 2010 more south. Visited each site twice in 2010 to generate unbiased occupancy sites. Presence/absence data recorded during 1st visit. 2nd visit, also recorded presence/absence data by different observer. Observers trained to distinguish pygmy rabbits from cottontails, and fresh sign rather than old sign.
Methods: Occupancy Analysis using Program MARK, and AIC. Very arbitrary way of evaluation. All 9 of the models, evaluated.
Power Analysis: this was a pilot season – what is the most efficient design . 95% probability of detecting 15%.

Results: 907 total complexes documented. Counting complexes is subjective, (see table in power point presentation).
AIC stands for the method of ranking the models.
Models tease apart detection from occupancy.
79% in PAPA, 82% in reference area. Very high occupancy out there. Detection also quite high; 75% in first survey, 95% in second. Plots surveyed later in the season had higher occupancy.
Only looking at one year's worth of data. Pretty good chance of no difference; 5% probability of no data affect overlapping the areas.
Pygmy rabbit population is stable. Suppose that next year at a different time of year, we would expect a decline in population. Thresh hold is 15% decline. Consistency in survey dates very important.
Discussion/Recommendations: Occupancy increased as the season progressed. Field observations suggest juvenile dispersal (peak mid-late summer). Survey date affects occupancy. August and September best time to conduct surveys. In 2010, mean survey dates identical. Consistent observer skill/training, consistent search effort, analysis: MARK, Robust Design Occupancy. In 2011 they will use Program MARK.
Review: Unbiased occupancy estimates; 79% occupancy estimated in PAPA, 82% in reference area, maintain consistency.
Joel: overview of white tailed prairie dogs: 2010 Monitoring: same methodology as with Pygmy Rabbits.
Acknowledge Troy and Chae – did most of the collection/data work.
They aren't as far along as the Pygmy rabbit analysis.
Objectives; monitor trends, matrix has same criteria as pygmy rabbits (looking for 3-year change or average 15% decline). Original methods were to monitor prairie dog towns already mapped out. 2010 survey effort – used generalized random tessellation stratified sample of plots (GRTS).
Much greater distribution with new sampling method. Lot of occupancy outside areas considered a 'town'.
Key is whether or not plot occupied (not by how many).
Looked at burrow densities.
Analysis methods:
Occupancy rates: PAPA .25 occupied (96% CI): reference area 20% occupied. Take into affect .57 detect-ability. Blind surveys: Second surveyor didn't know what 1st surveyor surveyed.
Analysis methods – burrow density: total vs active.
Future monitoring prairie dogs: look at burrow density, change in occupancy.
Further analyses:
RAPTORS: Jessica Pollock:
Raptor monitoring from 2010
Production unknown means nest was on private land, did not have access later.
Estimates only on fledges – monthly surveys rather than weekly.
Burrowing owl surveys not part of the survey this year.
Results: 94 new nests.
Discussion: 2011 recommendations: productivity. Suggest surveying twice a week – active nests. Found a lot of duplicate nests in BLM database.

Overview of Sage grouse: Matt Holloran: (handout-no power point): Telemetry data. Birds captured in the spring, and followed. Appendix B. Several sage grouse things.
30% change. Did not meet thresh hold in 2010. 7.7% increase in total # of active leks in treatment complexes vs reference complexes. Treatment: Mesa, Dukes Triangle, Yellowpoint; Reference: East Fork, Soapholes/Ryegrass & Speedway.
Overall Treatment Leks (active) in terms of bi-complex, actually did not hit any threshold (30% decline). 100% increase Dukes Triangle. Worth noting that 2009, threshold surpassed on duke's triangle (66% decline).
Peak # breeding males: treatment 30% average control over 2 years. 2 year running average: standardizing change in # males counted in treatment leks vs control. Saw 2.3% decline in treatment leks relative to control. 3rd – nesting success. 15% average difference over two years between treatment and control. Nest location did not dictate – rather where she was bred. See handout thru 7. Nothing interesting as of yet with sage grouse.
Pronghorn: Hall Sawyer: power point presentation: (Ryan could not make it today.)
Monitoring directed by the matrix – similar to mule deer. Key is changes in #s in anticline. 15% decline. No data to present, but basic approach to pronghorn abundance efforts: Estimating this in the winter is a difficult challenge – visibility and large group size. Using fixed wing transects. 400' above ground flights. GPS pronghorn groups. Can count groups of less than 50. Film larger than 50 head to count later. Distance sampling is when you assign groups – how far off the transects they are. Hard to do in winter because of large groups. Protocol called for 3 different flights. Did two, but called off 3rd because of no snowpack.
30 GPS collars, 15 in treatment, 15 in reference. Will drop about Nov 1st. Analysis will then be done. Feb – draft report. April – final report.
Resource selection and estimating migration routes: emphasize with mule deer and pronghorn projects, they will be estimating migration routes (w/GPS). Need to incorporate an area with the (line) of migration route. Developed new statistical framework to estimate utilization area. Can combine migration routes of individuals. Allows us to identify which areas used by larger populations. This may be an excellent way to target habitat improvements for both mule deer and pronghorn.

Questions for Mark, Jessica, and Matt:

Shane: Pygmy Rabbits – date an important consideration - ? Environmental questions that might compound that loyalty, or is it as yet unknown? At this point it is unknown. Definitely keep this in mind. If the timing of the breeding season varies from year to year – will need to watch dates.
Shane: White-Tailed Prairie dog: thought that he heard goals were based on actual declines in occupancy at sites. If that's true, at the section sampling design necessary for future, why continue to monitor areas that we didn't detect prairie dogs? Answer: one goal is presence/absence which means sampling the same plots over time. Revisit same sites for documentation. That species shifts around. Mark comments: #1 thing to learn when using occupancy for analysis, have to sample the same areas. Also – prairie dogs in pilot stage; published studies indicated lack or very poor correlation – total or active burrow counts – and actual abundance. Evidence that indicates no reason to believe that actual population is

declining. Reasonable ways of estimating abundance, but very expensive. He recommends saving money on burrow counts and spending on better sample size.
Art: what is strategy to narrow 700 sites (pygmy) in area? Recommend 390 sites surveyed in future. (status questioner). Will use data on this year (prairie dogs) to adjust intervals for next year(s).
Raptors: Scott: clarification: following BLM protocol in monitoring compared to pygmy's; they don't have treatment and control areas. Strictly the PAPA and 1 mile buffer. Raptors not included in the matrix. Strictly annual monitoring.
Mike: Planning - raptor nests big piece of planning process. How soon after that date (7/1) could they get a final report? Jessica – they do monthly reports to the BLM and the BLM will apply stipulations as soon as they know. Therese: states final report posted on web page. All reports will be on web page. Jessica – BLM will know vast majority by May.
Cally McKee, Ultra: Will BLM, on an annual basis, say which nests (big picture look) for annual planning meetings? Will they get some sort of overview on active nests, etc. (shape files)?
Shane: need to put more thought into that – authorized Feb to Feb, data not here till April – need to answer this. We have data for 2010, so next Feb planning meeting, plus using last 3 years data – probably logical way to go. Shane says we need to sit down with biologists and flesh this out.
Shane: raptors: intrigued with nesting success #s. Generally speaking, those species would generally nest along the riparian corridors. Riparian corridors would seem to be more productive, buy why ferruginous hawks more productive – not related to size of body. Jessica : had 5 large clutches this year – possibly good prey year? Productivity #s are only estimates.
Cally: burrowing owls removed from RFQ, will BLM post a release from the surveys they did? Shane does not know the answer to this.
Sage grouse questions: Matt: Mike: originally a 2009 draft released (KC Harvey report should be on website). 2010 report out there yet? Therese doesn't have it yet – anticipated date is sometime in next 3 months. Lots depends on how much data gets incorporated. They can write report on data they (Matt) collected
Cally: is Matt expecting to include all data he didn't collect in his report? Matt is expecting to include it. 2009 winter concentration data , and from 2010: that data will be out next spring. Cally thinking 2009-2010 – one year of winter data: that will be included in upcoming report.
Aimee Davison, Shell: will we be able to see the data, whether it's in Matt's report, or other reports? Therese comments that she and Matt need to sit down and figure out how it will come out, but it will be public.
Cally: in RFQ, previous year final report due Jan 15, 2011? Expected final report data for sage grouse RFQ for this year? Matt thinks that there was a date in the RFQ – mid January was time frame expected. Lot of it depends on direction with COOP direction and how to pursue what was brought up there.
Aimee: request (RFQ) – have that out on the website, much like the mule deer and pronghorn, for public. RFQ that went out, dates to be analyzed (transparency between that the matrix and what is to be analyzed). PAPO to do this. These reports being run thru the G&F. They're talking about the RFQs already issued. Selection being done, then it will be posted.

Pronghorn Questions: none

BREAK – be back at 2:57

OPEN DISCUSSION AND PUBLIC COMMENT

Linda Baker: Upper Green: regarding Sage Grouse: G&F has collected info for a long time. Efforts upgraded over the past few years. Why aren't we considering very good published info? Why aren't we looking at all long term data? Scott: As an agency they do look at long term reports, annually. For the PAPO, they follow the matrix specifically, so carve out complexes identified. Linda – they have long term info – and not using historical data, also have comparative info for leks in control areas as well as outside of them. Have a lot of lek data. Most recent info on G&F website 2008 – 37% decline on Pinedale anticline compared with outside areas… Dean – clarification – leks within the Pinedale anticline - just different analysis taking out a subset within the infrastructure of the development or within 1 mile of that. Is there a slight difference between the leks Matt is surveying compared with what G&F is surveying? No, per Dean – just different analysis to tease out leks associated with impacts vs those (Linda and Dean to discuss). Dean – just a matter of a different way of looking at the matrix and analyzing it. Data by complexes different by job completion report. Same data.
Linda: Modify question to ask why the analyses are different for the same lek complexes, ,and can we make them similar so we can understand long term trends? Rhetorical question for now….. Scott: in the ROD, 2007 was start, so that is what matrix analyzes.
Cally: Can BLM tell us where snow and traffic monitoring data is, and will it be released with the public, and is it being shared with contractors (pronghorn, etc.)? Therese – yes it has been shared with other contractors but hasn't been made public because the database isn't up for that yet.
Steve: TRCP: what process exists (or method) for wildlife issues – done elsewhere – brought into future monitoring and management efforts? (to make better decision making). Scott: good point, but we have anticline specific contractors collecting for specific matrix. Steve: is it correct to say that the matrix is the only data being considered in future management. Scott says yes. Shane agrees. Decisions made on site specific for this project area to be properly applied - Adaptive management process. There are generally differences in vegetation and environments from area to area. Can't use except for broad area data. Steve suggests that that is a very narrow view of land and resource management, and hasn't been discussed statewide or nationally – caution going forward.
Pete Guernsey – QEP: Indicated 3 adaptive management recommendations. But data will still be collected. Drop avoidance distances mule deer and pronghorns. 3rd – dropping of nesting success? Level of effort for gathering data for nesting success is rather extensive – are we still going to gather location data for this? Scott says no. We will not be collaring grouse annually.
Aimee: Snow and traffic info could potentially work into some of the questions that we have, using for instance, mortalities we saw today. Were there significant snow events that happened in that time period that may correlate in some way to answer questions? It would be great if there was some way to proactively get that info out to the contractors, and inferences made.

Aimee thinks that that was the reason it was collected - noted in RFQ. Monitoring and mitigation plan? Noted that it is to be updated on a yearly basis. Are there plans to update that for this coming year?
Shane – That is a piece of the consideration process and feeds into what we heard today – challenges and process. Yes, it should be done, but doesn't know if it has been done. Collection of data plays integral role.
Linda – why species 05, 06, 07 – development started in 2001 - why did we start collecting data so late? Shane – can't answer that. Scott: does not know answer to that either. Linda suggests that we consider long term data – consistently gathered.
Cally: Explain why areas are different - Why not using historical data? Area within the project defined by certain boundaries and looking at data within certain criteria set up by project.
Dean – to clarify – lek monitoring data in regards to the way surveys conducted, since about 2001 or 2, when we really started getting a high percentage of leks – getting 3 site visits for that lekking period gave them a pretty good indication of males. Have had good discussion of whole matrix - where is start date – should we use a longer period? Dean – agency didn't have much (any) lek data since 1990s, then by about 2000, more emphasis put on count data (survey crew is visiting that lek once per year) and deriving count off of that. Counting about 90+ percent of known leks annually now, but haven't been doing that for a very long period of time.

One more question - ? none.

Shane – observations: what he heard:

Thank you to everyone, especially public. Info provided will be acted upon. Thanks to presenters also. Effort and passion into them!
Interested in receiving follow up comments via email. Do that within next 7 days (by Wednesday 11/3/2010).
Talked about a lot of different things; looks like we touched on 4 areas to move forward on.
1st area, discussion about the monitoring we are doing now. Commitment and interest to continue. Suggestions on new areas – look into definition of current habitat conditions on mesa; initial reports from Hall on survival information – some interest in pursuing further; heard as we are implementing mitigation treatments, we should do our best to fold those impacts of habitat enhancements into the population models – effects of particular treatments; suggestion to look at sorting out incremental influences of various factors taking place in PAPA and mule deer funnels - contributing influences on population influences to sort out effects of anticline and others. Certain challenges in doing that heard.
2nd area: Suggest investigations looking at different habitat treatment methods. For past 20 years, been doing habitat enhancements - take a look and see what effects are, and possibly speed process of expanding from research plot to landscape scale treatment and manage risks. Heard reclamation – notion of looking at reclamation and get better bang for buck. Discussed methods used for reclamation, talked about doing reclamation, not only doing it, but what exactly are we doing that we are calling reclamation? Container plants, seed and species mix. … Suggestion about most recent WY reclamation plan out. Timing and speed of reclamation to offset some piece of wildlife population changes.

3rd area: implementation of treatments – focus connection back to monitoring – before we tear up ground – take time to figure out what we have and correlate back to some habitat factor; then once treatment is done, monitor it and report back on if sacrifice, vs end results, was a success. Notion of putting mitigation treatment in, since with other public lands, treatments good.
Great observation - may or may not have overall plan for Sublette herd in general as a way of prioritizing, strategizing, identifying goals for mitigation efforts – great way of using time and funding available to us to achieve timely response.
Suggestion that we identify up front what our goals are before we undertake the mitigation treatments – "here's what we hope to accomplish and why it's important"; then if we achieved it. Suggestion that we define what we mean by mitigation (purpose of). If we are mitigating for an impact, is our goal to slow down, stop, restore, or increase above and beyond? Need clear idea of what we're hoping to accomplish.
Summer – Sommers-Grindstone conservation easement is great place to look to leverage protection of ground development we have in future - thinks there is an action/motion to develop a plan for this, working with private landowner to improve.
4th area: suggestion to review the winter exception process we have in place now. Authorizing activities on flanks, outside core area, and within.
What will we do with this info: Commitment to you – ROD for the Supplemental EIS – actions to take by the trigger being met will be timely and will be met over time. Now that we have the info, and will have the notes, we will watch for internet feedback, group at table will sit down in next couple weeks. Make decisions on what can be done on ground and what schedule can be realized after agreement.
Info valuable and will be put to good use. Today's input – adaptive management process is living and moving process. We will continue to implement SEIS and monitor to see if the trend continues or represents normal variations in populations.
Once decisions are made, public will have info. We will schedule another discussion– in January (approx) – another meeting (format not set yet), and this information will be presented and feedback gathered and applied.

3:30 P.M. meeting adjourned

Comments sent via email:

Pam Curry <pcurry@wyoming.com>

10/28/2010 03:22 PM

Mule Deer Study

These are my comments on what actions BLM should take to reverse its failure to protect and conserve the public resources they're charged with maintaining:

1. Reinstate winter closure. Enforce it. Do not allow exceptions. This is the only action that has any chance of stopping the decimation of our mule deer herd. On-site and off-site mitigation measures are a nice experiment and may possibly do some good but unless you stop doing those specific activities that caused this to happen you will fail and you alone will be responsible for the annihilation of our wildlife.

2. Remove industrial representatives from the management table. Seasonal restrictions were imposed on everyone here long before industrial development began on the mesa. You didn't ask permission from leaseholders then and you don't need to ask for it now. Those people are not land managers. They're not biologists. They do not represent the public. Their opinions should have no more weight than the views of interested citizens, sportsmens groups, wildlife advocates or other stakeholders.

Pamela Curry
Pinedale, WY

Tim Zebulske

10/28/2010 10:41 AM

comments on PAPA wildlife situation

At the October 27 meeting, I noticed that several people stated that there are potentially many factors contributing to the decreased numbers of mule deer on the Pinedale Anticline. Mild winters, gas field development and other human activity in winter, prolonged cold weather in the spring, habitat fragmentation, increased road kills, increased predator populations in the mule deer summer range, climatic changes, natural population fluctuations, etc., are all recognized as possible causes of the decline. While no specific cause has been identified, everybody seemed to agree that a trigger has been activated and it's time to take mitigation action.

As noted during the comment portion of the meeting management actions taken in an effort to address the situation may or may not constitute actual mitigation. Vegetation treatments to increase available forage, establishment of conservation easements, more stringent restrictions on human activity in the winter, "habitat enhancements" and several other actions are being considered. One person at the meeting commented that there should be defined objectives or success criteria associated with management actions. How do we measure "success" of a mitigation effort? If forage production on a fertilized area increases by 15%, is that a "success" if the deer population remains stable? Is a vegetation treatment area or conservation easement a "success" if it attracts and supports deer at a location that's outside the Mesa winter deer count area? Not only should objectives be defined, but with so many variables at play, it's really not possible to establish any sort of cause and effect relationship between a management action and the deer population. It could be several years from the time an action is taken to the time its effects occur, however, there is no way to know.

For instance, suppose that in 2011 the BLM decides to fertilize 500 acres on the Mesa to increase forage, they establish conservation easements on 2,000 acres on the flanks of the Mesa, replace typical fences with 23 miles of wildlife friendly fence along the migration route, and the gas operators complete the liquid gathering system and reduce traffic in the field by 20,000 truck trips per year. There's no way to correlate a deer population change to any of the actions taken.

If the population went up by 100 after the 2011 management actions, how do we know which, if any of the management actions was the cause? Maybe the deer found better forage on a huge nearby ranch (not part of the management actions) where livestock operations ceased because the rancher is getting old and doesn't have the energy to run cattle any more. Maybe spring and summer rains resulted in lots of food in the summer range and the deer came into the winter with more body fat than usual, so they survived the winter to be counted on the Mesa. Maybe gasoline prices spiked and there were fewer tourists on the roads around Pinedale and hence, fewer auto/deer collisions. Maybe all weather conditions were "perfect" for deer in 2011. There is no way to identify that the management actions taken had any effect on the deer populations.

If the deer population on the Mesa dropped by 300 after the 2011 management actions, does that mean that none of the management actions were effective? Should BLM completely abandon such actions in the future because the population went down? Maybe the decline was the result of a management action that occurred in 2009? Or perhaps one of the management actions was beneficial and the deer population would have declined by 500 if not for this action, but because none of the variables are

isolated from others, there is no way to know which action had the beneficial effect. Again, there's no way to link a management action to the change in the deer population.

Because of the complexity of this situation, the time between an action and its effect, and the multiple variables involved, many of them outside the control of the PAPO and cooperating agencies, I don't have a "solution" to this, except to suggest that the number of variables should be reduced to the fewest possible. Science-based, measurable success criteria (measured in mule deer numbers, not any other units) should be established for all proposed management actions. Perhaps the entire Sublette herd should be used as a better indicator of a representative population, rather than just the deer on the Mesa in the winter. Perhaps mule deer populations in "control" areas outside the PAPA and outside the Sublette herd should be used to determine if local deer populations are changing independent of those in a larger area.

Thanks for the chance to comment. Good luck with figuring out what to do.

November 8, 2010

Shane DeForest

Field Office Manager, Pinedale

Bureau of Land Management

PO Box 768

Pinedale, WY 82941-0768

Re: Pinedale Anticline Mule Deer Decline and BLM Response

Dear Shane,

Our groups are writing to express concerns and offer recommendations to the BLM regarding the significant decline of mule deer on the Pinedale Anticline. The groups signed on to this letter have a long history of involvement in this project.

First, we want to say that the continued decline of mule deer on the Anticline is deeply troubling and unacceptable.

This iconic herd is of great value to many -- for hunting, for wildlife viewing and aesthetic reasons and of tremendous ecological importance. The remarkable migrations and movements of these animals as

documented by Hall Sawyers' research is a testament to the significance of this herd and as a measure of the health of our wild lands. For these reasons its protection is paramount.

Public promises and regulatory commitments have been made repeatedly by BLM and the operators stating that wildlife impacts will be addressed. These deer are some of the most studied in the world, and declines have been well documented over a 10 year period. Now is the time for strong action to prevent the loss of this world-class wildlife resource.

We appreciate your and John Ruhs' statements confirming that "aggressive and positive action" is needed at this time. We write to support you in this approach and offer concrete suggestions.

Review of Efficacy of the ROD Mitigation Responses

The Pinedale Anticline 2008 record of decision (ROD) outlines four sequential mitigation steps that BLM will utilize to address wildlife impacts when population decline thresholds are exceeded:

1) On-site efforts, including "protection of flank areas from disturbance" and "limits on delineation drilling;"

2) On-site habitat enhancements of the project area;

3) On-site/off-site efforts, such as "conservation easements or property rights acquisitions to assure their continued habitat function," or for maintenance of corridors, forage reserves, etc;

4) Adjustments of spatial arrangement and/or pace of ongoing development.

Already, two of these strategies have been implemented to a large degree. The ROD incorporates a 5 year moratorium on drilling in the flanks of the PAPA, and delineation drilling has been limited somewhat within the ROD. Regarding off-site mitigation responses, an enormous amount of funding has been expended for conservation easements and other off-site habitat projects in the Upper Green River Valley from the Pinedale Anticline Mitigation Fund, and the Jonah Infill Mitigation Fund. The amounts spent are significant. Since 2006 these funds have spent over $22 million on off-site wildlife mitigation in the Anticline region. But despite these significant expenditures in alignment with the ROD mitigation measures, the herd is still declining.

Consequently, we believe BLM must take strong additional actions to stop the loss of this herd.

We believe that the agency must take aggressive action to invest in the other two mitigation options: on-site habitat enhancements and adjustments to the development.

On-site habitat enhancement has had little investment by the Pinedale Anticline Mitigation Fund. $46,000 has been allocated for one project to experiment with fertilization of winter mule deer forage – and on very limited acreage. In last week's meeting, Wyoming Game and Fish (WGFD) officials readily admitted that on-site habitat enhancement is difficult, as traditional forage enhancements require destruction of shrubs and forbs and time to allow for new growth. Fertilization of winter forage is experimental at this stage and not a proven enhancement.

Recommendations for Action

Given this history showing failure of the mitigations utilized to date, and the severity of the mule deer declines, we recommend the following:

1) The BLM needs to acknowledge that the mule deer declines documented on the Anticline must be reversed, and therefore all mitigation efforts provided for in the ROD, and perhaps otherwise, are on the table for addressing this problem aggressively. We recommend that the BLM follow the CEQ guidelines (40 CFR 1508.20) for mitigation which prioritizes effectiveness in the following hierarchy:

- Avoiding impacts altogether
- Minimizing impacts by limiting the degree or magnitude of the action
- Rehabilitating or restoring the affected environment
- Reducing the impact over time by preservation and maintenance operations
- and lastly, compensation.

These also mirror the recommendations of WGFD for oil and gas development.

2) The BLM should invest in on-site habitat enhancement as part of a long term strategy, recognizing that these efforts alone will not happen fast enough, nor are sufficient alone to address the problem.

- In conjunction with the WGFD, BLM should quickly fund a literature search, review and analysis of known mule deer habitat enhancement research to identify proven strategies for enhancing on-site winter forage productivity.

- Habitat use patterns in the PAPA should be mapped utilizing GIS collaring data overlaid on locations of all drilling within core development areas, delineation/potential development areas and other disturbance sites to determine direct and indirect habitat loss through human activity.
- A plan for increasing on-site winter forage productivity should be developed for those areas showing the most promise for winter use, utilizing research from above, as well as species behavioral modeling and development scenarios.

3) Adjustments of the drilling plan should be phased in starting this winter to implement on-the-ground changes immediately that can help the Mesa mule deer. These can include:

- All delineation activities required to adhere to seasonal winter drilling restrictions.
- Some limitations on winter time drilling in Core Areas DA-1 and DA-2.
- No winter drilling during mule deer seasonal restrictions in DA 1 & 2.
- Well-free zones designated in core crucial winter range on the Mesa.

As the research shows, fundamentally oil and gas wells and associated human activity drive the deer away. Deer use is highest about 2.5 to 3.5 km away from wells, and lowest where well pads are clustered. The deer do not acclimatize to this development. Thus it is apparent that significant areas of the Pinedale Anticline must remain "well-free" with limited human activity if this herd is going to survive near current numbers.

4) Further analysis must occur before additional funding is spent on off-site mitigation efforts. There was significant discussion about habitat enhancement off-site on transitional ranges and conservation easements to mitigate these losses. Before more money is expended off-site, BLM needs to have a well researched, data-driven plan that shows effectiveness for these types of mitigations for the Mesa mule deer herd. In particular, the data on survival rates and timing and place of spring mortality need to be further considered.

5) The BLM needs to have a public accountability plan. The agency should develop and make available to the public a document that lays out future steps, milestones, measures and policy changes it will enact to address the mule deer decline. This plan should include report timelines for mitigations implemented, measures of effectiveness, and opportunities for public involvement, research and policy changes. The agency should also evaluate future funding needs to accomplish its goals in the plan and communicate these with the Pinedale Anticline Working Group and the PAPO.

Thank you for this opportunity to submit these comments. Please keep us alerted to the future public comment opportunities of this matter.

Sincerely,

Stephanie Kessler

Wyoming Program Manager

And on behalf of:

Dan Heilig

Western Resource Advocates

262 Lincoln Street

Lander, WY 82520

(307) 332-3614

Bruce Pendery

Program Director

Wyoming Outdoor Council

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Meeting attendance forms and memo, below.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Pinedale Field Office
PO Box 768
1625 West Pine St.
Pinedale, WY 82941

In Reply Refer To:
1610, 6000, 3160 (WYD01) P

October 20, 2010

MEMORANDUM

TO: John Ruhs, District Manager, High Desert District

FROM: Shane DeForest, Field Manager, Pinedale Field Office 10-20-10

SUBJECT: **Pinedale Anticline Project Area Record Of Decision Adaptive management Process**

As formalized in the Pinedale Anticline Record of Decision (ROD) (pages 18,19, & E1), the BLM will utilize an Adaptive Management approach in analyzing and, when needed, adapting or revising decisions, policies and processes used for delineation, development, managing and monitoring in the Pinedale Anticline Project Area (PAPA). Although the overall concept for use of Adaptive Management is found in Appendix E of the Record of Decision, it does not provide a detailed process on how to adopt Adaptive Management recommendations.

A core concept of Adaptive Management is to give the BLM the ability to clarify and react to the dynamic nature of energy development and, in particular, to changes in the biological environment in a timely manner. Adaptive Management allows for changes in mitigation, monitoring or field operations when monitoring results or other indices suggest that a change is necessary or desirable. The PAPA ROD does not constrain the BLM from making any changes until an annual meeting. Adaptive Management is not intended as a method to revise the original intent and philosophy of the ROD.

The annual planning meeting sets the general framework, i.e., public involvement and discussion for the Adaptive Management process and satisfies another core concept of Adaptive Management; public consultation.

Some Adaptive Management decisions require immediate action, while others may be deferred until a regularly scheduled annual planning meeting. An example of a change that could be postponed until an annual meeting would be a change that would not have immediate ramifications to the biological resources of concern in the Pinedale Anticline area. An example of an Adaptive Management change which may require convening of a special meeting would be if a significant event or opportunity arises which requires immediate consideration and action. Holding to the original intent and philosophy of the ROD, proposed changes would be made after consultation with the PAWG, the operators, and the public and in consideration of their comments.

The following steps will be followed when proposing Adaptive Management changes:

1. When, due to changing conditions, new monitoring results, or the need for document revision occurs, Adaptive Management changes can be proposed to provide clarification to the ROD. The proposal will be formally written as a memo to the Pinedale Field Manager requesting an Adaptive Management clarification.

2. The Field Manager would convene a Review Team to review the proposal. The Review Team will be made up of PAPO, BLM and other agency staff specialists.

3. Any proposal adopted must be consistent both with the intent of and the processes laid out in the ROD. Proposals outside these parameters would need to have new NEPA analysis conducted before adoption could occur. Therefore, the Review Team will evaluate the proposal and determine if it is consistent with the intent of the ROD. During its review, the Review Team will also make a determination as to whether or not the proposed change requires immediate attention or if it can be deferred until the next planning meeting and whether or not additional NEPA compliance would be necessary to implement the change. This deliberation would be documented in a memorandum from the Review Team to the Field Manager.

4. Two fundamental concepts of the Adaptive Management process are timely reaction and public coordination/consultation. After review, should the proposal be judged to have merit by the Field Manager, it will be posted to the JIO/PAPO and Field Office website for public comment for at least 14 days and forwarded to the Pinedale Anticline Working Group (PAWG) for their review, which will also be at least 14 days. The proposal will also be sent to the PAPO Board of Directors for their information and review; however, a decision by the Board is not necessary for Adaptive Management changes.

5. After the receipt of public and PAWG comments, discussions will be held with the operators. Comments received from the public, PAWG, and operators will be considered by the Review Team.

6. The Review Team will prepare a recommendation and forward it to the Field Manager who will accept or deny the proposal.

7. The record of the Adaptive Management process including the original proposal, Review Team deliberations, public, operator and PAWG comments, and Field Manager Decision will be documented to the file and released to the public. Decisions adopting proposed changes will be considered formal amendments to the Final Record of Decision.

The proposal submission and review process laid out here is considered consistent with the ROD. Given the complexities of the Adaptive Management process, future adjustments to this outline may be made. Changes to this process could be considered at annual planning meetings.

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MEETING ATTENDANCE FORM

PURPOSE: Wildlife Annual Planning Meeting

TIME: FROM ________ **TO** ________ **DATE:** Oct. 27, 2010

NAME	ORGANIZATION	PHONE	E-MAIL ADDRESS
Therese Hartman	WGFD/PAPO	3615364	therese.hartman@wgf.state.wy.us
Hall Sawyer	WEST, Inc.	755-0901	hsawyer@west-inc.com
Joel Thompson	WEST Inc	214-2799	jthompson@west-inc.com
Troy Rintz	WEST Inc.	421-8437	trintz@west-inc.com
Scott Smith	WGFD		
Kaitlyn McAvoy	Pinedale Roundup	367.2123	kmcavoy@pinedaleroundup.com
Cathy Purves	TU	307.332.6700	cpurves@tu.org
Margaret Spearman	USQ	307 634 6579	mspearman@spearmanco.com
Art Reese	USQ	307-634-2558	artreese@qwestoffice.net
Dennis Beccue	QEP	303-672-6965	Dennis.Beccue@QEPRES.com
Debbie Stanberry	QEP	303 308-3068	debbie.stanberry@qepres.com
Cat Urbigkit	Press	307 276-5393	catu2@mac.com
Mark Pollock	HWA	307-760-6821	Mark@haydenwing.com
Jessica Pollock	Hayden-Wing Assoc	307 742 5440	Jessica@haydenwing.com
Dean Clause	WGFD	307 367 4353	
Jim Racich	private	367 6673	
Renan Yanish	Aster Canyon	367-6829	
Nicole Thiele	Aster Canyon	3676824	
Rollie Sparrowe	TRCP	859-8606	rds@centurytel.net
John Dahlke	WWC	367.2765	johndewyo@...
Gregg Shedd	WWC	367-2765	
Jordan Vana	WCT	367-7007	

MEETING ATTENDANCE FORM

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PURPOSE: Wildlife Annual Planning Mtg

TIME: FROM_____ **TO**_____ **DATE:** Oct 27 2010

NAME	ORGANIZATION	PHONE	E-MAIL ADDRESS
Theresa Gulbrandsen	BCM	367-5359	
Dent Farr	Sublette Examiner	367 3207	
Steve Belinda	TRCP	231-3178	sbelinda@trcp.org
Cathy McK	Ultra		
MIKE HELWIG	"		
Pete Guernsey	QEP	367-3943	
Melissa Cunningham	QEP	367-4012	melissa.cunningham@qepres.com
Kevin Williams	QEP	367 3941	kevin.williams@qepres.com
Aimee Davison	Shell	367-7904	aimee.davison@shell.com
Tim Murray	Shell	720 563-8707	t.murray@shell.com
Renee Seidler	WCS	435 760-7267	rseidler@wcs.org
Mike Smith	QEP	307.214.3981	mike.smith@qepres.com
Peter Aengst	TWS	406-586-1609	peter_aengst@tws.org
Steff Kessler	TWS		
Lloyd Dorsey	GYC	307-7346004	ldorsey@greateryellowstone.org
John Ruhs	BCM		
Linda Baker	UGRA	3670	
Jeff Johnson	Encana	303 881-7666	
MATT Hollman	WWE		
Justin Carroll	WLCI		
Jim Wasseen	WLCI		
Dan Rogers	BCM		

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MEETING ATTENDANCE FORM

PURPOSE: _____

TIME: FROM _____ **TO** _____ **DATE:** _____

NAME	ORGANIZATION	PHONE	E-MAIL ADDRESS
C. D. Symes	SoCF	367 8597885	
Pam Curry		367 6877	
Mark Thonhoff	BLM	367-5357	
Pat Aullman	Rep Hunnicutt	307-333-1038	Pat.Aullman@mail.house.gov